

-11-

Claims.

- 1). A manufacturing process for wood and aluminium window and door frames, or frames made of PVC or other materials, comprising stages of:
- working of solid wood or wood-panel components to create housings with linear transversal shapes for housing metal elements, or PVC elements;
 - assembly of the above-mentioned components to create fixed and mobile frames, the assembly being done by joining the cross-pieces and the uprights of the frames using metal corner-brackets, positioned at the four corners of the frames, and straps, or other elements which resist traction, stretched about the frames;
 - fixture with screw means of the metal or PVC elements, in the housings made in the internal sides of the fixed frames and the external frames of the mobile frames;
 - application to the fixed and mobile frames of hinges, seals and other mechanical components destined to guarantee closure, opening and in general good functioning of the frames,
- ~~2). The manufacturing process of claim 1,~~ wherein the assembly of the wooden components for making fixed and mobile frames is done by joining the cross-pieces (13') and the uprights (11') of the frames (10') with use of metal corner-brackets (16), threaded pivots (21) positioned obliquely at corners of the frame, and straps (18) stretched between two ends (19, 20) of the threaded pivots (21) in such a way as to exert a traction on two sides of the corner of an intensity which obtains a perfect join of the cross-pieces (13') and the uprights (11') forming the corner.
- ~~2). 3).~~ The manufacturing process for frames of claim 1, wherein the assembly

BEST AVAILABLE COPY

AMENDED SHEET

of the wooden components for realising the fixed and mobile frames is done by joining the cross-pieces (13') and the uprights (11') of the frames (10') with the use of threaded pivots (21) passing obliquely at corners of the frame, and corner-brackets (16') ends of which are constrained to pivots (51, 52) which are slidable with respect to housings (53, 54) lodged entirely in cavities afforded in the cross-pieces (13') and in the uprights (11') at positions corresponding to ends (19', 20') of the threaded pivot (21'); traction being exerted by means of screws (57, 58) interacting between the housings (53, 54) and supports (59, 60) of the pivots (51, 52), which traction guarantees an exact corner coupling of the cross-pieces (13') and the uprights (11').

3). ~~4).~~ The manufacturing process for frames of claim 2 ~~3~~, wherein the housings (15, 28, 35) of the metal elements (24, 25, 31) are transversally L-shaped and are created by cutting wooden components (11, 26, 12) of the frames (10) in a longitudinal direction.

4). ~~5).~~ The manufacturing process of any one of the preceding claims, comprising an application of external protection guards (29, 29') made of aluminium or PVC, by pressure-constraining the guards (29, 29') between the metal elements and the wooden frame, or between the window glass frame channels and the wooden frames.

5). ~~6).~~ Wooden and aluminium frames, or PVC frames or frames made of another material, comprising:

frames made of solid wood or wood in panel form, assembled by joining cross-pieces and uprights of the frames, with use of metal corner-brackets, positioned at four corners of the frames, and straps, or other elements which are resistant to traction, stretched about the frames;

housings with linear transversal profiles afforded in the wooden frames for housing metal or PVC elements;

metal or PVC elements fixed by means of screws to fixed and mobile frames of the frames, respectively in housings made in internal sides of the fixed frames and in external sides of the mobile frames;

hinges, seals and other mechanical components for guaranteeing closure, opening and operation of the frames, said

~~7).~~ The frames ~~of claim 6,~~ comprising fixed frames and mobile frames, assembled together by joining cross-pieces (13') and uprights (11') of the frames (10') with use of metal corner-pieces (16), threaded pivots (21) passing obliquely at corners of the frame, and straps (18) stretched between two ends (19, 20) of the threaded pivots (21) in such a way as to exert a traction on two sides of the corner of an intensity which obtains a perfect join of the cross-pieces (13') and the uprights (11') forming the corner.

~~6).~~ ~~8)~~ The frames of claim 6, comprising fixed frames and mobile frames assembled by joining the cross-pieces (13') and the uprights (11') of the frames (10') with the use of threaded pivots (21) passing obliquely at corners of the frame, and corner-brackets (16') ends of which are constrained to pivots (51, 52) which are slidable with respect to housings (53, 54) lodged entirely in cavities afforded in the cross-pieces (13') and in the uprights (11') at ends (19', 20') of the pivot (21'); traction being exerted by means of screws (57, 48) interacting between the housings (53, 54) and supports (59, 60) of the pivots (51, 52), which traction guarantees an exact corner coupling of the cross-pieces (13') and the uprights (11').

~~7).~~ ~~9)~~ A joint for union of elements to be used as cross-pieces (130) and uprights (110) comprising: at least one joint pivot (210) having a tension-rod function, housed snugly and coaxially inside a cylindrical housing (200) predisposed in a reciprocally-coupled cross-piece (130) and an upright (110); at least one block (530, 540), for interacting with means which are associable to the ends of the

joint pivot (210) for placing the tension-rod in a state of tension; said means normally comprising screws 300 with which an interaction can be actuated between the ends of the joint pivot 210 and the blocks 530, 540 which enable the joint pivot 210 to be placed under tension; the block (530, 540) being predisposed to be snugly housed in cavities (250) afforded in the cross-piece (130) and the upright (110); the block (530, 540) being shaped in such a way as to restore the shape of the element, cross-piece 130 or upright (110) when housed in the relative cavity (250) in which the cavity (250) is afforded.

8). ~~10).~~ The joint of claim 7 ~~9~~, wherein the means associable to the ends of the joint pivot (210) for realising the tensioning of the joint pivot (210) comprise screws (300).

9). ~~11).~~ The joint of claim 8 ~~10~~, wherein the block (530, 540) is delimited by a straight circular cylindrical surface dimensioned in order to afford a snug housing thereof in the cavities located in the cross-piece (130) and the upright (110).